

Examiner Aristotelis M. Psitos
Response Page 3

Art Unit 2653
USSN 09/972,574

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A carriage servo control system for servo-controlling a movement of carriage means in a vertical direction to a track formed on a recording medium, in which the carriage means has detecting means mounted thereon for transmitting an optical beam to the track so as to perform at least one of recording and reproduction of information on and from the track, said carriage servo control system comprising:

error signal producing means for producing an error signal showing an error between a radiated position of the optical beam on the recording medium and a position of the track;

periodic signal producing means for producing a periodic signal of which period is constant and previously determined so as to correspond to a movement accuracy of the carriage means;

drive signal producing means for producing a drive signal to move the carriage means on a basis of both the produced periodic signal and the produced error signal; and

drive signal supplying means for supplying the produced drive signal to moving means configured to move the carriage means in the vertical direction, so as to move said carriage means by the moving means on a basis of the supplied drive signal,

wherein said drive signal producing means produces the drive signal on

Examiner Aristotelis M. Psitos

Art Unit 2653

Response

Page 4

USSN 09/972,574

a basis of a partial error signal and the periodic signal, said partial error signal serving as the error signal having a value not less than a predetermined threshold value;

wherein said drive signal producing means produces the drive signal on a basis of a partial error signal and the periodic signal, said partial error signal serving as the error signal having a value not less than a predetermined threshold value;

wherein said drive signal producing means multiplies the periodic signal and the partial error signal produced together to produce the drive signal;
and

wherein said drive signal producing means multiplies the periodic signal and the partial error signal produced together to produce the drive signal.

2. (original) The carriage servo control system according to claim 1, wherein said periodic signal producing means produces the periodic signal made up of only a signal component with a frequency not more than a predetermined frequency.

3-6. (canceled)

7. (original) The carriage servo control system according to claim 1, wherein said drive signal producing means produces the drive signal on a basis of a partial periodic signal and the error signal, said partial periodic signal serving as the periodic signal and being included within a period previously determined based on the error signal.

8. (original) The carriage servo control system according to claim 2,

Examiner Aristotelis M. Psitos
Response Page 5

Art Unit 2653
USSN 09/972,574

wherein said drive signal producing means produces the drive signal on a basis of a partial periodic signal and the error signal, said partial periodic signal serving as the periodic signal and being included within a period previously determined based on the error signal.

9. (original) The carriage servo control system according to claim 7, wherein said drive signal producing means multiplies the partial periodic signal produced and the error signal together to produce the drive signal.

10. (original) The carriage servo control system according to claim 8, wherein said drive signal producing means multiplies the partial periodic signal produced and the error signal together to produce the drive signal.

11. (currently amended) An information recording medium on which program for carriage servo control is recorded so that the program is readable by a computer incorporated in a carriage servo control system for servo-controlling movement of carriage means in a vertical direction to a track formed on a recording medium, in which the carriage means has detecting means mounted thereon for transmitting an optical beam to the track so as to perform at least one of recording and reproduction of information on and from the track, said program causing the computer to function as:

error signal producing means for producing an error signal showing an error between a radiated position of the optical beam on the recording medium and a position of the track;

Examiner Aristotelis M. Psitos

Art Unit 2653

Response

Page 6

USSN 09/972,574

periodic signal producing means for producing a periodic signal of which period is constant and previously determined so as to correspond to a movement accuracy of the carriage means;

drive signal producing means for producing a drive signal to move the carriage means on a basis of both the produced periodic signal and the produced error signal; and

drive signal supplying means for supplying the produced drive signal to moving means configured to move the carriage means in the vertical direction, so as to move said carriage means by the moving means on a basis of the supplied drive signal,

wherein said drive signal producing means produces the drive signal on a basis of a partial error signal and the periodic signal, said partial error signal serving as the error signal having a value not less than a predetermined threshold value;

wherein said drive signal producing means produces the drive signal on a basis of a partial error signal and the periodic signal, said partial error signal serving as the error signal having a value not less than a predetermined threshold value;

wherein said drive signal producing means multiplies the periodic signal and the partial error signal produced together to produce the drive signal; and

wherein said drive signal producing means multiplies the periodic signal and the partial error signal produced together to produce the drive signal.